

NOTES ON THE REPTILES AND AMPHIBIANS OF GREENE COUNTY, OHIO

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About five years have passed since the author became interested in the reptiles and amphibians of Greene County. Since that time there has been some collecting in nearly every part of the county, and many accessible areas have been collected heavily. A large number of specimens has been preserved in the collections of Antioch College at Yellow Springs; in the Dayton Public Library Museum; in the collection of J. T. Wood; and in my own collection.

I wish to express my thanks to Dr. Henry Federighi of the Biology Department of Antioch College and to Mr. C. A. Barker, director of the Dayton Public Library Museum, for permission to examine the preserved material in those institutions. Mr. J. T. Wood has kindly supplied me with data from his Greene County specimens, has added to the field notes on many species, and has read this manuscript. Mr. Karl P. Schmidt has also offered many helpful suggestions. The map of Greene County was drawn by Mr. John E. Flynn of the University of Michigan. For their invaluable field assistance I am indebted to many members of the Dayton Society of Herpetology; especially: Richard R. Knotts, Harold J. Walters, Richard S. Brown, and Mr. and Mrs. Doyt E. Ladd.

When the work on Greene County was begun, the county was relatively little known herpetologically. Conant (1938) reported 13 forms of reptiles from the county, and Walker (1946) added six forms of amphibians. Wood (1945a) and Wood and Duellman (1947a) added two more species to the list, bringing the total to 14 reptiles and seven amphibians. It is the purpose of this report to bring this list of species up to date and to supplement this with field notes.

Greene County lies in the glaciated till plains of southwestern Ohio (fig. 1). It is drained for the most part by the Little Miami River, which flows south through the western part of the county, and its tributaries. It is also partially drained by the Mad River, which flows through the northwestern part of the county. Both of these rivers flow into the Ohio. Throughout most of the county the physiography is that of the typical rolling land of the till plains. There are, however, two definite exceptions. The most striking is the deep gorge cut by the Little Miami River in the northern part of the county. The other is a marshy area in the northwestern part of the county. This area, Huffman Prairie, has undergone extensive drainage in the last decade, which has probably brought about a considerable change in the faunal distribution in this area. At one time Greene County was part of the great oak-hickory forest, but when the land was settled it was soon cleared and farmed. Thus, today there is very little natural forest left in the county. There are small woodlots in the corners of farms, and in some areas unsuitable for farming there is some natural forest. However, the greatest part of the land is farmed or used for pasture. The Clifton Gorge area and John Bryon State Park are the only large forest reserves left in the county.

Several species known from surrounding counties were not found in Greene County during the course of our collecting. Following is an annotated list of the species that were not found in the county, but have been recorded by various authors from surrounding counties or have been preserved in one of the cited collections. *Necturus m. maculosus* and *Cryptobranchus a. alleganiensis* have been found in the Mad River in Montgomery County (Wood and Duellman, 1947b). During the early spring of 1949 and 1950, a special attempt was made

to find various species of *Ambystoma*, but suitable breeding ponds were not to be found in the county. *Ambystoma texanum* (reported as *A. jeffersonianum*) has been found to be abundant in parts of Montgomery County (Wood and Duellman, 1947b). *A. jeffersonianum* and *A. maculatum* have been collected to the south in Warren County, and King (1935) reported *Ambystoma opacum* from Clinton and Warren Counties. *Desmognathus f. fuscus* has been found in Montgomery County (Wood and Duellman, 1947b), but collecting in likely places in Greene County has not revealed this species. *Plethodon c. cinereus* is very common in most of the surrounding counties, but none have been recorded from Greene County, even though in the spring of 1950 most of the woodlots in the county were systematically searched for this species. It is interesting to note that *Plethodon*

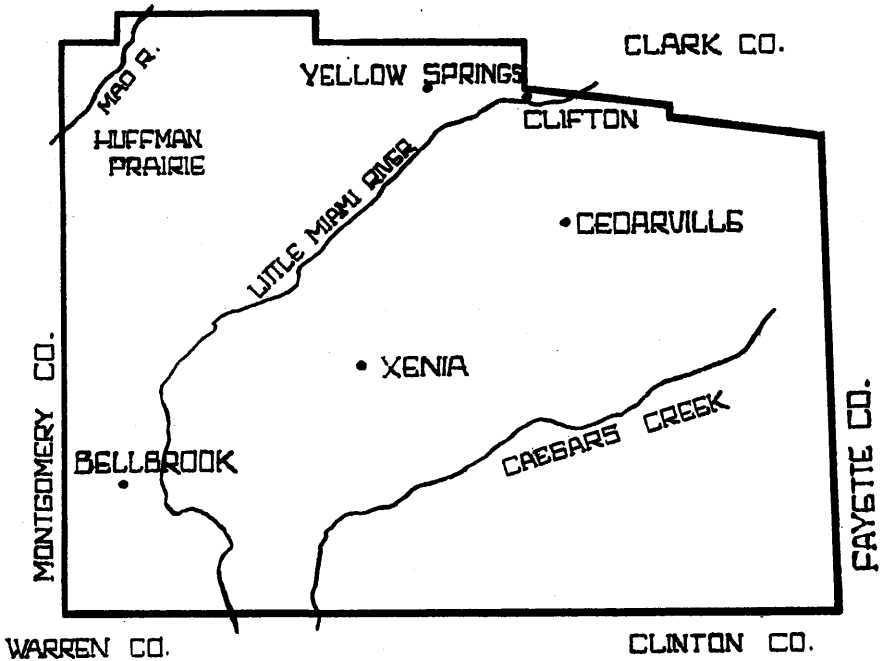


FIGURE 1. Map of Greene County, Ohio.

richmondi is much more abundant in Greene County than in any of the surrounding counties. In places in Montgomery County *Plethodon c. cinereus* and *Plethodon richmondi* may be collected on the same woodland slope; yet, only *Plethodon richmondi* can be found in the same situations in Greene County. Walker (1946, p. 98) reported *Rana s. sylvatica* from Warren and Clinton Counties. As for lizards, *Eumeces fasciatus* has been found in Warren and Clark Counties, and *Eumeces laticeps* (reported as *E. fasciatus*) has been collected in Montgomery County (Wood and Duellman, 1947b). Only two snakes known from surrounding counties have not been found in Greene County: *Heterodon p. platyrhinos* in Montgomery County (Wood and Duellman, 1947b), and *Opheodrys v. vernalis* in Fayette County (Conant, 1938, p. 47).

Following is an account for each of the species known from the county with notes on habitat and life history when available. All known locality records represented by preserved specimens are listed.

Ambystoma tigrinum tigrinum (Green). One specimen in the collection of J. T. Wood was collected from a leaf-filled cellar stairwell at Yellow Springs, Miami Twp., in September 1946 by an Antioch College Student.

Plethodon richmondi Netting & Mittleman. This species has been found to be very abundant in many areas in the western part of the county, especially at Glen Helen, Yellow Springs, Miami Twp. (fig. 2). Here there are several small ravines from which streams flow into the Little Miami River. At the rims of these ravines are limestone outcroppings, the upper formation of which is the Cedarville. Beneath this is the Springfield, which weathers more quickly. Thus, an undercut has been formed beneath the Cedarville. From the Springfield formation sloping downward to the stream beds are wooded talus slopes. On these slopes *Plethodon richmondi* is abundantly found under limestone slabs lying on or imbedded in the talus. The great majority of the specimens have been collected between mid-October and the last of May, and only about a half a dozen specimens have been taken during the warm months. Collecting in hot weather has usually failed to reveal this species, but at certain times in the winter months it appears to



FIGURE 2. Talus slope at Glen Helen near Yellow Springs.
Habitat of *Plethodon richmondi*.

be abundant. Three juveniles collected April 7, 1949, were evidently young of the previous year. Wood (1945b) reported *Plethodon richmondi* in this area to have very large ovarian eggs during late April and May; so, the species must lay its eggs in late spring or early summer, meaning that they should hatch in late summer or autumn. County records are: Glen Helen, Yellow Springs; and Clifton Gorge, Miami Twp.; 2 miles south of Zimmerman and one and a half miles south of Alpha, Beaver Creek Twp.; one and a half and two and one-half miles northwest of Xenia, Xenia Twp.

Eurycea bislineata rivicola Mittleman. This appears to be the most common salamander in the county and has been found every month of the year. During the winter months specimens may be collected in the vicinity of springs (fig. 3.) Scores of specimens were collected in the winter of 1948, and it was noted that a large percentage of these were females containing ovarian eggs. The species has been found in a variety of habitats, but springs and their immediate vicinity usually support large populations. Specimens have also been taken in small rocky streams, and during the winter many larvae have been found under water cress in spring seepages. The species has been found in close association with *Eurycea l. longicauda*. County records are: Yellow Springs and Clifton Gorge, Miami Twp.; Bellbrook, Sugar Creek Twp.; three and one-half miles northwest of Xenia and 2 miles south of Zimmerman, Beaver Creek Twp.

Eurycea longicauda longicauda (Green). This active species is common in certain localities in the vicinity of springs and small rocky streams. By way of exception a number of specimens were found under limestone slabs on talus slopes in late spring. At this time the streams contain much water, and the slopes are moist due to spring rains. In July, specimens were found at dusk crawling on a moist wall by a small cascade. This species has been found at: Yellow Springs and Clifton Gorge, Miami Twp.; Bellbrook and Sugar Creek one and one-half miles northwest of Bellbrook, Sugar Creek Twp.; one and one-half miles and two and one-half miles northeast of Xenia, Xenia Twp.; and Cedarville, Cedarville Twp.

Bufo terrestris americanus (Holbrook). The Dayton Public Library Museum has two specimens: one each from Yellow Springs and Clifton, Miami Twp. Walker (1946, p. 32) reported the species from Xenia, Xenia Twp., and from Clifton.

Bufo woodhousii fowleri Hinckley. One specimen in the collection of J. T. Wood bears the data: Yellow Springs, Miami Twp., August, 1946.

Acris crepitans Baird. This species is most often found in marshy areas and along the edges of ponds. No specimens were taken far from water. Walker (1946, p. 38) reported the species



FIGURE 3. Spring seepage near Yellow Springs. Habitat of *Eurycea bislineata rivicola* and *Eurycea l. longicauda*.

from Clifton, Miami Twp. Other localities are: Yellow Springs, Miami Twp.; Bellbrook, Sugar Creek Twp.; Beaver Creek Twp.: three and one-half miles northwest of Xenia and 2 miles west-northwest of Xenia.

Pseudacris nigrita triseriata (Wied) J. T. Wood has specimens from near New Germany, Beaver Creek Twp., collected in May 1947. Mr. H. J. Walters has told me of hearing a loud chorus of these frogs in April 1949 at the same locality. No specimens have been seen other than in the spring months.

Hyla crucifer crucifer Wied. Walker (1946, p. 60) recorded this species from Trebein, Beaver Creek Twp.

Hyla versicolor versicolor (Le Conte). The tree frog has been found in chorus on June 14, 1942, by J. T. Wood and on June 9, 1950, by myself. Large numbers were found at a pond in a gravel pit 2 miles west-northwest of Xenia. The species has also been taken at Alpha, Beaver Creek Twp.; and Yellow Springs, Miami Twp.

Rana catesbeiana Shaw. This species was taken by Wood at Glen Helen, Yellow Springs, Miami Twp. He informed me that the bull frog can be heard calling from the lake in the glen on most warm nights during the summer.

Rana clamitans Latreille. This species is found in a great variety of habitats: rocky streams, springs, ponds, and marshy areas usually in or near wooded areas. On a warm July evening several specimens were found in small holes in a limestone outcropping, where there was a small cascade. The holes were barely large enough to house a single frog. There are specimens from Yellow Springs and Clifton, Miami Twp.

Rana palustris Le Conte. Walker (1946, p. 84) reported this species from Clifton, Miami Twp.

Rana pipiens pipiens Schreber. Common along the margins of grassy streams and ponds, this species is thought to be abundant over the entire county. Locality records are: Yellow Springs and Clifton, Miami Twp.; Caesar's Creek and one and one-half miles northeast of Xenia, Xenia Twp.; also reported by Walker (1946, p. 91) from Xenia, Xenia Twp.

Carphophis amoenus helenae (Kennicott). Morse (1904) reported this species from Yellow Springs. Subsequent collecting has not revealed another specimen.

Diadophis punctatus edwardsii (Merrem). Conant (1938, p. 39) reported this species from Yellow Springs. Recently, two specimens were collected on talus slopes inhabited by *Plethodon richmondi*. H. J. Walters reported that he has taken two specimens near Bellbrook, Sugar Creek Twp., but unfortunately none were preserved. Locality records: Glen Helen, Yellow Springs, Miami Twp.

Coluber constrictor constrictor Linnaeus. (Specimens of this snake appear to be intergrades between *Coluber constrictor constrictor* and *Coluber constrictor flaviventris*.) This snake has been found more often in the vicinity of farms and meadows than in woodlands. Wood reported a specimen collected near New Germany that was swallowing a large *Thamnophis o. ordinatus*. Specimens in the collections are from: Bellbrook, Sugar Creek Twp.; 1 mile south of Fairborn, Bath Twp.; near New Germany, Beaver Creek Twp.; and two and one-half miles northeast of Xenia, Xenia Twp. Conant (1938, p. 52) reported the species from 3 miles west of Xenia, Xenia Twp.

Elaphe obsoleta obsoleta (Say). This species is not uncommon in the county. Locality records are: Yellow Springs, Miami Twp.; Bellbrook, Sugar Creek Twp.; and Xenia, Xenia Twp.

Lampropeltis dolia triangularum (Lacepede). The secretive habits of this snake render it hard to find, but the species is not thought to be scarce. Specimens in the collections are from: Yellow Springs, Miami Twp.; 3 miles west of Yellow Springs, Miami Twp.; near New Germany, Beaver Creek Twp.; 2 miles north of Zimmerman, Beaver Creek Twp.; and one and one-half miles northeast of Xenia, Xenia Twp. Conant (1938, p. 68) reported the species from 3 miles west of Xenia, Xenia Twp.

Natrix kirtlandii (Kennicott). One specimen collected at Xenia, Xenia Twp., on April 4, 1941, was found under a board in a well-drained meadow about twenty feet from a brook behind the state fish hatchery.

Natrix septemvittata (Say). This snake is abundant along swift-flowing, rocky streams fringed with willows, and can be found along most creeks and rivers (fig. 4). It is less pugnacious than *Natrix s. sipedon*, but uses its musk glands freely. Locality records are: Yellow Springs and Clifton, Miami Twp.; Bellbrook and Sugar Creek one and one-half miles northwest of Bellbrook, Sugar Creek Twp.; Alpha, Beaver Creek Twp.; Beaver Creek Twp.: three and one-half miles northwest of Xenia; and Caesar's Creek, Xenia Twp. Conant (1938, p. 79) reported the species from Yellow Springs, Miami Twp.; Oldtown and 2 miles north of Oldtown, Xenia, Twp.

Natrix sipedon sipedon (Linnaeus). Found in a variety of habitats ranging from springs and rocky streams to lakes and marshes, this species is never found far from a permanent body of water. Specimens in the collections are from: Yellow Springs and Clifton, Miami Twp.; Bellbrook and Sugar Creek one and one-half miles northwest of Bellbrook, Sugar Creek Twp.; Alpha, Beaver Creek Twp.; Caesar's Creek and two and one-half miles northeast of Xenia, Xenia Twp. Conant (1938, p. 83) recorded the species from Yellow Springs, Miami Twp.; Oldtown and 2 miles north of Oldtown, Xenia Twp.

Storeria dekayi dekayi (Holbrook). (Specimens of this snake appear to be intergrades between

Storeria d. dekayi and the mid-western subspecies, *Storeria d. wrightorum*.) A specimen in the Dayton Public Library Museum bears the data: Huffman Prairie, Bath Twp., March 26, 1939. Conant (1938, p. 90) reported the species from Spring Valley, Spring Valley Twp.

Thamnophis butleri (Cope). Conant (1938, p. 98) reported this snake from Clifton Gorge, Miami Twp. and from 4 miles north of Xenia, Xenia Twp. A specimen recently brought into the Dayton Public Library Museum was from Huffman Prairie, Bath Twp.

Thamnophis ordinatus ordinatus (Linnaeus). Found mostly in the vicinity of streams and marshes, this snake appears to be common during the mating season in the early spring. Locality records are: Yellow Springs, Miami Twp.; Beaver Creek Twp.: three and one-half miles northwest of Xenia, Alpha, Trebein, and New Germany; 3 miles southwest of Cedarville, Cedarville Twp.; and one and one-half miles northeast of Xenia, Xenia Twp. Conant (1938, p. 105) reported the species from Yellow Springs, Miami Twp. and 2 miles north of Xenia, Xenia Twp.

Sistrurus catenatus catenatus (Rafinesque). Formerly, this species was reported common in the prairie-marsh area in the northwestern corner of the county. This area, Huffman Prairie,



FIGURE 4. Little Sugar Creek near Bellbrook. *Natrix s. sipedon* and *Natrix septemvittata* are found here.

has been extensively drained by the army. Wood found a specimen dead on the road at Patterson Field, Sept. 17, 1940; and on June 15, 1941, he collected a living specimen in the marsh on a grass hummock surrounded by water. In the Dayton Public Library Museum there is a specimen from Huffman Prairie, Bath Twp. This specimen had swallowed a *Storeria d. dekayi*. Recently, I examined a specimen killed on July 19, 1949, at Huffman Dam, Bath Twp. The species is still found in reduced numbers in this area; although, it is evidently less abundant than prior to the drainage. Conant (1938, p. 114) reported the species from Fairborn, Bath Twp.

Sternotherus odoratus (Latreille). J. T. Wood reported this species from Glen Helen, Yellow Springs, Miami Twp.

Chelydra serpentina serpentina (Linnaeus). Conant (1938, p. 125) reported this species from Yellow Springs, Miami Twp. Wood also reported it from Yellow Springs Brook and Lake Helen, Glen Helen, Yellow Springs.

Clemmys guttata (Schneider). J. T. Wood has a specimen from Trebein, Beaver Creek Twp., collected June 20, 1947, in a small tributary to the Little Miami River. Subsequent collecting has not revealed another specimen.

Terrapene carolina carolina (Linnaeus). There is a specimen in the Dayton Public Library Museum from John Bryon State Park, Miami Twp. Wood reported the species from Glen Helen, Yellow Springs, and Clifton Gorge, also in Miami Twp.

Graptemys geographica geographica Le Sueur. J. T. Wood reported a specimen from Little Beaver Creek near Alpha, Beaver Creek Twp., and one from Grinnell's Mill, Little Miami River, Miami Twp.

Chrysemys picta marginata (Agassiz). Specimens have been observed in pools in the Little Miami River near Yellow Springs, and others have been taken in that vicinity. Wood reported the species common in Lake Helen at Yellow Springs, Miami Twp. A specimen in the Dayton Public Library Museum bears the data: Yellow Springs, January 15, 1930. There is a notation that the specimen was found dead after a thaw. Conant (1938, p. 147) reported the species from Clifton, Miami Twp.

Amyda spinifera spinifera (Le Sueur). The Dayton Public Library Museum has a specimen with the data: Huffman Dam, Bath Twp., June 17, 1940.

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